Dairy Production

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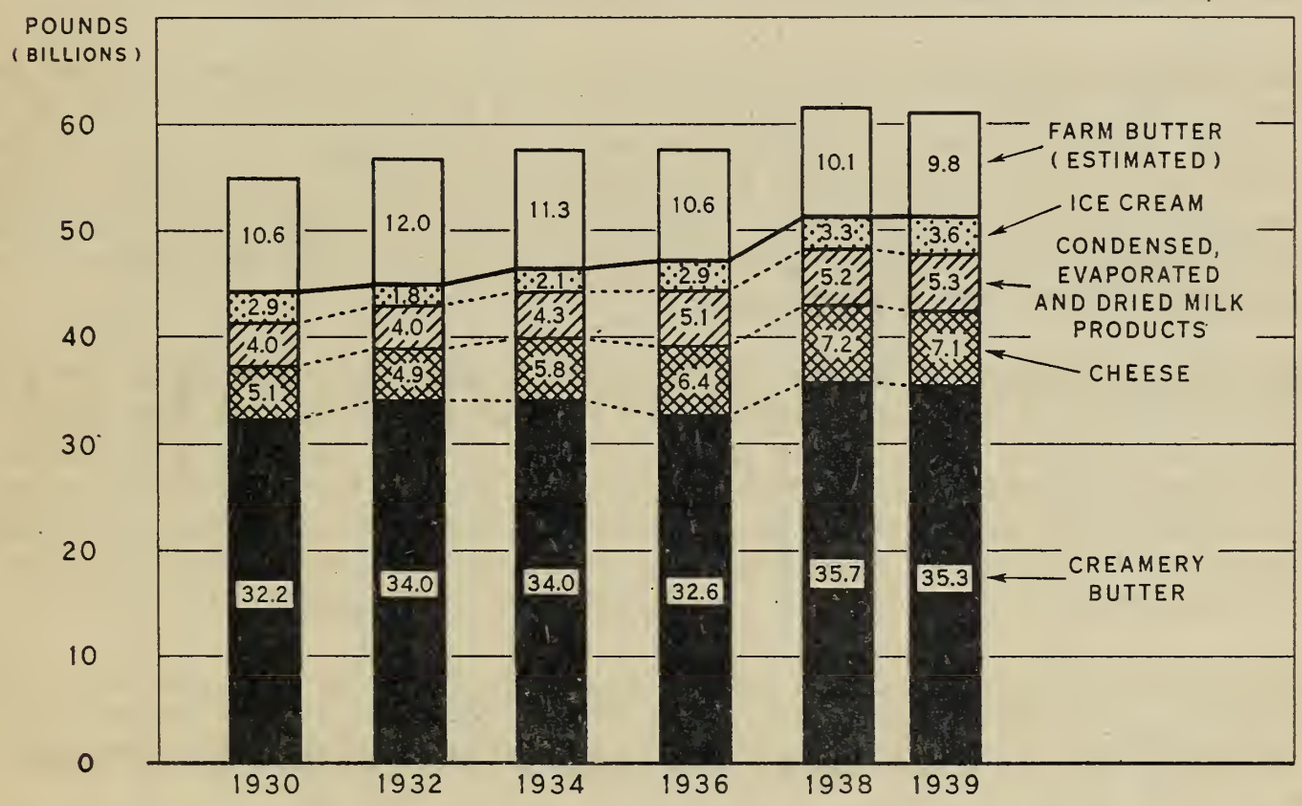
MILK USED FOR MAKING DAIRY PRODUCTS IN THE UNITED STATES, SELECTED YEARS, 1930-39



U. S. DEPARTMENT OF AGRICULTURE NEG. 315 AGRICULTURAL MARKETING SERVICE

Between 1930 and 1939 the quantity of milk used annually for the commercial manufacture of dairy products increased from 44.1 billion pounds to 51.2 billion pounds, but .8 billion pounds of this increase was merely a shift from farm butter to creamery butter. During these years, while the population was increasing a little over 6 percent, increases in the milk used for commercial dairy products were: creamery butter 10 percent, cheese 39 percent, condensed, evaporated, and dried milk combined, 33 percent, ice cream 24 percent and all these products, as a group, 16 percent. An upward trend in the production of these products seems likely to continue for some time. (See page 8).

Milk production, favored by mild weather, a late pasture season and liberal feeding, was about as much above average during October as it has been since the first of the year. Production probably continued high during the first 10 days of November or until the sudden change to severe winter weather affected production in the Central States. Some seasonal price adjustments, perhaps delayed by the heavy fall production, appear to have been hastened by the storm. Prices of some grains and feeds are substantially higher than a month ago. As when prices were rising at the beginning of the war, some buyers may be anticipating needs.

Milk production in October is estimated at 8.5 billion pounds, about .4 billion pounds above production in October last year and about .5 billion above the 1934-38 average for the month.

Daily milk production per capita is estimated at 2.07 pounds for October compared with 1.98 pounds in October last year and a 1934-38 average for October of 1.99 pounds. During October, as during the first ten months of 1940 taken together, per capita production was 4 percent above the 5-year average for the corresponding period, and apparently the highest during the 12 years for which monthly estimates have been made.

The trend of production during September and October appears to have been about normal. The effect of good rains in the West has been about offset by dry weather in the South. Changes in the proportion of the cows in production appear about normal and do not indicate any significant shift in the proportion of fall-fresh cows, or forecast any important departures from the usual trend of production during the winter months. However, the mid-November storm probably affected production and deliveries over a wide area.

The rate of feeding is high. On November 1 dairy correspondents were feeding 4.5 pounds of grain and concentrates per cow per day. This is less than the 4.6 reported on November 1 last year when pastures were poor, but, considering pastures, it was the most liberal feeding reported during the 10 years for which comparable records are available. In mid-November the rate of feeding is probably quite generally at a ten year peak for this season of the year except locally in the West where pastures are good and in the South Central area.

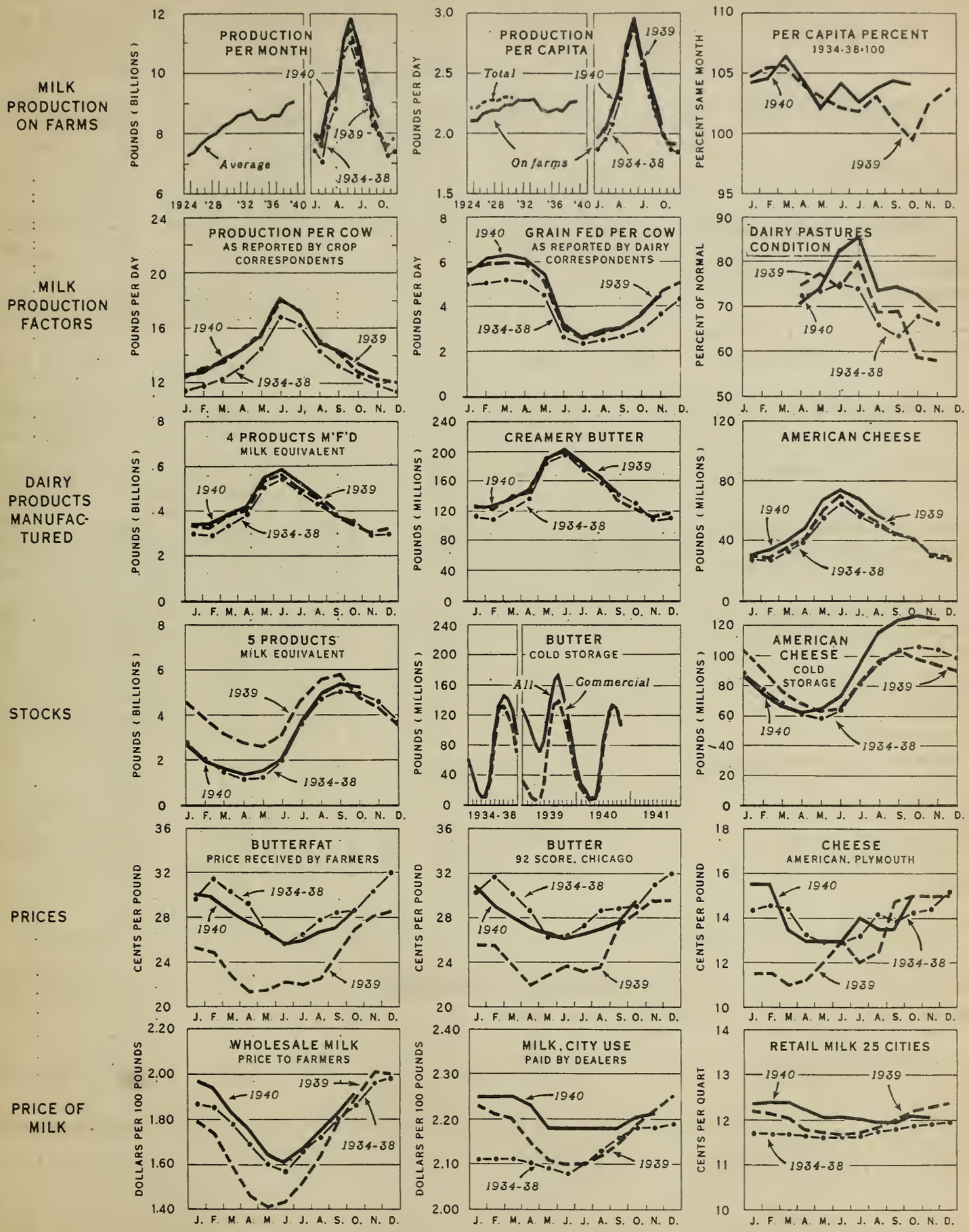
Feed supplies and hay stocks appear ample in practically all areas. Feed grain production has been large and present livestock could be fed about as liberally as in any of the last dozen years without drawing on the large carryover of corn.

Looking ahead it seems probable that per capita milk production will be above average during the winter. With favorable weather it may be as much above average as during the earlier months of this year. If there is further improvement in demand conditions, some new highs are to be expected.

The October production of the principal manufactured dairy products was 12 percent above the rather low production in October last year and almost equal to the 1936 record for the month. Creamery butter production estimated at nearly 136 million pounds, was 11 percent above last year but only moderately above average. Cheese production continued high.

Stocks of dairy products on November 1 appear rather low when compared with November 1 stocks of recent years, but, excluding government holdings, known commercial stocks were 19 percent above last year and 12 percent above the 5-year average. Stocks declined more rapidly than usual during October but comparisons with last year are complicated by the heavy trade purchases of evaporated milk and other products that followed the beginning of the war in September 1939.

DAIRY PRODUCTION: GRAPHIC SUMMARY FOR THE UNITED STATES



UNITED STATES DEPARTMENT OF AGRICULTURE
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Dairy Production — November 15, 1940

SUMMARY OF DAIRY STATISTICS FOR THE UNITED STATES

		Average 1934-38	1939	1940 Total or avg.	1940 Percent of 1939
MILK PRODUCTION ON FARMS					
Total, per month ..... mil. lbs.	Aug.	9,194	9,672	9,812 a/	101.4
	Sept.	8,262	8,533	8,865 a/	103.9
	Oct.	7,942	8,077	8,510 a/	105.4
Per capita, daily average..... lbs.	Sept.	2.141	2.165	2.233 a/	103.1
	Oct.	1.990	1.981	2.073 a/	104.6
Per cow, per day..... lbs.	Sept. 1	13.23	14.17	14.39	101.6
(As reported by crop correspondents)	Oct. 1	12.54	12.82	13.40	104.5
	Nov. 1	11.80	12.30	12.74	103.6
DAIRY PASTURES: Condition, % of normal pct.	Oct. 1	67.9	58.5	72.8	124.4
	Nov. 1	66.1	57.8	69.0	119.4
PRODUCTION OF MANUFACTURED DAIRY PRODUCTS					
Creamery butter, monthly..... mil. lbs.	Sept.	139.6	132.3 b/	144.2 b/	109.0
	Oct.	129.0	121.9 b/	135.8 ad/	111.4
weekly.....week ending	Oct. 31	.....	.....	.....	111.1
	Nov. 7	.....	.....	.....	106.6
American cheese..... mil. lbs.	Sept.	43.8	45.7	51.0 b/	111.6
	Oct.	40.7	40.4 b/	45.1 ad/	111.6
Evaporated milk, case..... mil. lbs.	Aug.	172.7	190.9 b/	231.0 b/	121.0
	Sept.	151.1	158.3 b/	196.3 b/	124.0
4 products, milk equivalent..... mil. lbs.	Aug.	4291	4578	4684	102.3
(Creamery butter x 21, all cheese except skim	Sept.	3833	3721 b/	4123	110.8
x 10, canned cond. & evap. milk x 2.2)	Oct.	3549	3421	--	112.3 c/
STOCKS ON HAND					
Butter in cold storage..... .... mil. lbs.	Oct. 1	142.4	154.6	128.1	82.9
(Including government holdings)	Nov. 1	126.1	128.1	104.7 a/	81.7
Commercial holdings, only.....	Nov. 1	103.8	106.9	104.6 a/	97.8
American cheese..... mil. lbs.	Oct. 1	106.4	97.5	127.2	130.5
(Cold storage holdings)	Nov. 1	103.8	94.0	124.0 a/	131.9
Evaporated milk, case..... mil. lbs.	Sept. 1	262.2	355.1	349.4	98.4
(Manufacturers' stocks)	Oct. 1	261.0	135.1	380.5	281.6 f/
5 products, milk equivalent..... mil. lbs.	Sept. 1	5056	5799	5308	91.5
(Butter, all cheese, canned cond. & evap.	Oct. 1	5006	4841	5236	108.2
milk plus cream in cold storage)	Nov. 1	4591	4355	4635 cd/	106.4
PRICES					
Butterfat, per pound..... cts.	Sept. 15	28.4	24.7	27.1	109.7
(Prices received by farmers)	Oct. 15	28.6	26.9	28.8	107.1
Butter, wholesale, per pound..... cts.	Oct.	29.0	28.4	29.6	104.2
(92 score, Chicago)	Nov.	31.3	29.5	33.0 e/	111.9
American cheese, wholesale, per pound... cts.	Oct. 15	14.25	15.00	15.00	100.0
(Twins, Plymouth, Wisconsin)	Nov. 15	14.40	15.00	15.75 e/	105.0
Milk, wholesale, per 100 pounds..... dol.	Sept. 15	1.80	1.82	1.82	100.0
(All purposes, prices received by farmers)	Oct. 15	1.86	1.95	1.91 a/	97.9
Milk for city distribution, per 100 lbs. dol.	Oct.	2.18	2.19	2.20	100.5
(Prices paid by dealers, 3.5% basis)	Nov.	2.18	2.22	2.21	99.5
Milk, retail, delivered, per quart..... cts.	Oct.	11.88	12.22	12.06 a/	98.7
(Average, 25 markets)	Nov.	11.91	12.28	12.05 a/	98.1

a/ Preliminary b/ Preliminary revision c/ Forecast or interpolation d/ Not available when accompanying chart was prepared. e/ Price Nov. 14 f/ See comments.

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MILK PRODUCTION ON FARMS (Million pounds)

Year	Jan.-Mar.	Apr.-June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
1934-38	22,687	30,342	10,266	9,194	8,262	7,942	7,227	7,382	103,303
1939	24,338	31,895	10,671	9,672	8,533	8,077	7,556	7,816	108,558
1940	24,758	32,319	10,834	9,812	8,865	8,510			
			DAILY AVERAGE PER CAPITA (Pounds)						
1934-38	1.963	2.598	2.573	2.307	2.141	1.990	1.870	1.847	2.201
1939	2.066	2.674	2.623	2.376	2.165	1.981	1.914	1.915	2.266
1940	2.063	2.690	2.644	2.393	2.233	2.073			

Milk production per cow declined about as usual during October but on November 1, as on September 1 and October 1, production per cow was the highest for the date in the 16 years of record. In herds kept by crop correspondents milk production per cow averaged 12.74 pounds, exceeding the November 1, 1939 average by 3½ percent, exceeding the previous November 1 high record by 3 percent, and exceeding the November 1, 10-year average by more than 7 percent.

In the North Central part of the country the mild weather appears to have aided in maintaining milk flow through October. In 5 of the 12 States in this area November 1 production per cow was record high for the date. In the eastern Corn Belt and also in Nebraska fall pasturage available to milk cows was rather poor but supplementary feeding appears to have prevented any marked general reduction of milk flow from this cause. In the Western States, where fall pastures were among the best of recent years, milk production per cow was a record high for November 1 and unusually high compared with early October. In most of the South where the dry weather during October materially affected grazing conditions, milk production per cow declined more rapidly than usual for the month. In New England, where October was cold, production per cow declined more rapidly than usual during the month and dropped below the corresponding 10-year average for the first time since February. In the Middle Atlantic group of States, November 1 production per cow was somewhat above a year ago and above the 10-year average for the date. Details by States are shown on page 7.

The proportion of feed obtained from pastures by milk cows on November 1 was considerably larger than a year ago and nearly as great as on November 1 in any of the past 10 years. On November 1 pastures, including stalk fields, fall sown grains and other grazing crops, were furnishing more than the usual proportion of the feed of milk cows in the Western group of States and in most of the North Central area, except Nebraska, Indiana, and Illinois, according to reports received from dairy correspondents. However, in New England and New York, where the pasture season closed early and in a number of Southern States east of the Mississippi where the drought reduced growth, milk cows on November 1 were obtaining less than the usual proportion of feed from pasture.

Percentage of Feed of milk cows obtained from pasture as reported by Dairy Correspondents, Nov. 1, 1934-38 av., 1939-1940

Year	North Atlantic	E. North Central	W. North Central	South Atlantic	South Central	Western	United States
	Percent	Percent	Percent	Percent	Percent	Percent	Percent
1934-38 Av.	30.5	50.7	57.1	51.9	64.0	40.0	51.3
1939	23.0	36.6	48.7	47.1	58.6	38.5	43.3
1940	23.9	51.0	63.5	45.1	61.8	48.6	52.0

Dairy pastures were favored by a prolonged growing season, which partially offset the lack of rain in many States. For the country as a whole, the condition of dairy pastures on November 1 averaged 69 percent of normal, slightly less than on the corresponding date in 1935 and 1938, but higher than in the other four years for which November 1 records are available.

Milk cows were being well fed about November 1, even though more pasturage was available than at the same season in most of the last few years. Feed supplies were abundant on most farms, and prices of dairy products were not far from average in relation to values of the grain and concentrate rations being fed. In the North Atlantic and South Atlantic groups of States, including considerable areas where pasture feed was unusually short, the quantity of grain and concentrates reported as being fed per cow was the highest reported for November in the 10 years of record. In other groups of States, where more pasturage was available, the rate of feeding was mostly lower than a year ago, but higher than on the same date in the other years, except for heavy feeding in the western Corn Belt and some Western States in 1931 and 1932.

Grain and Concentrates fed per milk cow per day in herds kept by dairy correspondents, November 1, 1931-40

Date	North Atlantic	E. North Central	W. North Central	South Atlantic	South Central	Western	United States
	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
Nov. 1							
1931	5.1	4.4	4.2	4.1	4.4	3.3	4.31
1932	4.8	4.4	4.3	4.0	4.0	2.3	4.13
1933	4.6	3.9	3.3	4.3	3.2	2.1	3.55
1934	4.6	2.9	2.2	3.7	3.3	2.4	3.01
1935	4.8	3.5	3.0	4.8	3.1	2.5	3.44
1936	5.0	3.6	2.8	4.6	3.5	3.0	3.56
1937	4.3	4.3	3.4	5.2	4.2	2.8	4.06
1938	4.9	4.1	3.8	5.2	4.4	3.0	4.18
1939	5.3	4.8	4.2	5.5	4.5	3.7	4.61
1940	5.5	4.6	3.9	5.8	4.5	3.3	4.51

The value of the grain and concentrate ration being fed to milk cows on November 1 was reported by dairy correspondents at $1.28 per 100 pounds or only slightly above the average of $1.26 reported a year ago.

The valuation of the feed mixture fed to milk cows varies between years, between regions and between farms according to the proportion of each kind of grain and feedstuffs fed and the price of each. This year oats and barley were abundant and relatively cheap and they were each a larger proportion of the rations reported than in any of the preceding 9 years. On the other hand, the October price of corn was 25 percent higher than a year ago and the quantity of corn included in each 100 pounds of feed was only 60 percent of the quantity reported last year. These shifts in feeding will be more fully shown next month. Changes in the value of the rations in the various areas are shown in the following table:

Value per 100 pounds of grain and concentrates fed to milk cows in herds kept by dairy correspondents, November 1, 1938-40

Date	North Atlantic	E. North Central	W. North Central	South Atlantic	South Central	Western	United States
	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
Nov. 1							
1938	1.52	1.00	.78	1.40	1.16	1.22	1.10
1939	1.69	1.11	.97	1.52	1.36	1.40	1.26
1940	1.66	1.19	1.00	1.60	1.33	1.31	1.28

DAIRY PRODUCTION

State	Milk Produced per Milk Cow in Herds Kept by Reporters 1/			Condition of Dairy Pastures 2/		
	November 1 Av. 1929-38	November 1 1939	November 1 1940	November 1 Av. 1934-38	November 1 1939	November 1 1940
	Pounds			Percent		
Me.	13.1	12.5	12.8	76.2	70	69
N.H.	14.6	13.8	13.6	75.0	71	75
Vt.	13.1	12.7	12.9	79.4	75	75
Mass.	17.2	18.0	17.3	80.8	65	63
R.I.	3/	3/	3/	77.6	83	71
Conn.	16.7	18.5	16.4	77.0	77	63
N.Y.	15.4	15.5	15.8	77.2	58	71
N.J.	17.7	18.2	18.9	73.8	60	70
Pa.	15.4	16.1	15.7	74.2	62	78
N. ATL.	15.40	15.68	15.84	75.9	62.6	73.7
Ohio	14.1	14.1	14.5	71.0	49	67
Ind.	12.9	13.4	13.3	71.2	51	59
Ill.	12.6	13.3	14.4	70.0	58	62
Mich.	14.9	16.1	17.2	69.8	67	83
Wis.	13.3	13.4	14.4	74.4	61	75
E.N. CENT.	13.50	13.90	14.65	72.0	58.2	70.9
Minn.	11.9	12.4	12.7	59.8	57	66
Iowa	12.1	12.2	13.2	71.8	64	80
Mo.	9.1	9.0	9.9	56.6	47	60
N.Dak.	9.3	9.8	11.2	38.2	56	72
S.Dak.	9.4	10.0	10.0	40.6	48	55
Nebr.	11.1	11.5	11.5	47.8	41	45
Kans.	11.4	11.5	12.6	43.2	44	64
W.N.CENT.	10.82	11.09	11.86	56.3	53.3	65.4
Del.	3/	3/	3/	71.2	77	73
Md.	14.2	16.0	15.2	73.6	72	75
Va.	10.8	11.2	11.8	75.8	55	79
W.Va.	11.1	11.0	11.2	72.2	55	72
N.C.	10.6	11.4	11.4	73.2	64	62
S.C.	9.6	10.2	10.3	60.2	58	54
Ga.	8.2	9.2	8.8	62.2	65	59
Fla.	3/	3/	3/	77.0	75	62
S.ATL.	10.45	11.36	11.39	70.8	62.7	67.7
Ky.	10.6	10.9	10.5	64.8	46	48
Tenn.	9.1	9.3	9.7	59.8	47	48
Ala.	3/	3/	3/	61.6	67	57
Miss.	6.7	6.5	5.8	61.2	66	64
Ark.	7.8	8.0	8.1	58.6	57	65
La.	3/	3/	3/	69.8	70	67
Okla.	8.9	9.3	9.1	49.6	41	63
Tex.	8.5	8.4	8.5	59.8	49	63
S.CENT.	8.55	8.62	8.60	59.4	51.5	58.7
Mont.	11.8	14.5	13.8	56.2	75	86
Idaho	15.9	17.5	17.3	71.4	76	96
Wyo.	11.5	12.0	13.6	67.0	63	78
Colo.	11.6	13.7	13.6	59.8	52	69
N.Mex.	3/	3/	3/	63.0	70	65
Ariz.	3/	3/	3/	80.8	83	79
Utah	3/	3/	3/	67.8	70	75
Nev.	3/	3/	3/	78.2	85	90
Wash.	16.1	15.8	16.8	71.6	69	87
Oreg.	14.1	15.1	15.6	69.0	73	90
Calif.	16.8	19.3	17.4	74.4	66	81
WESTERN	15.92	15.55	15.78	69.8	67.6	82.1
U. S.	11.86	12.30	12.74	66.1	57.8	69.0

1/ Averages represent the reported daily milk production of herds kept by reporters divided by the total number of milk cows (in milk or dry) in these herds. Figures for New England States are based on combined returns from Crop and Special Dairy reporters and are weighted by counties. Figures for other States, regions, and U.S. are based on returns from Crop Reporters only.

2/ State averages are based on reports by crop correspondents. For regional and U.S. averages the States are combined in proportion to the importance of pastures to dairy production on November 1.

3/ State averages omitted because of instability, but reports are included in arriving at regional averages.

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MANUFACTURED DAIRY PRODUCTS

Milk used for the commercial manufacture of dairy products in 1939 totaled 51.2 billion pounds, according to computations based on the enumeration of dairy products manufactured that has just been completed by the Agricultural Marketing Service and cooperating States. The 1939 total almost equaled the high record of 51.4 billion pounds in 1938 and substantially exceeded the quantities used in previous years.

Between 1930 and 1939 the indicated quantity of milk used for these products increased 7.1 billion pounds or 16 percent and accounted for an increasing proportion of the milk produced. Milk production on farms during this period is believed to have increased 8.4 billion pounds or only 8 percent. While quantities of milk used for purposes other than manufacturing are less accurately known, estimates indicate that between 1930 and 1939 the quantity of milk used for fluid consumption on farms and elsewhere increased only about 6 percent and the production of farm butter declined.

Disregarding irregularities such as those caused by droughts, depression, war, tariff changes and relief distribution, recent trends towards higher production of evaporated milk, cheese, ice cream, creamery butter and bottled milk and cream are expected to continue for some years even though accompanied by relatively small per capita changes in total butter production and in all milk and cream used for fluid consumption. Trends which have been important during certain past periods and seem likely to continue to affect production include: (1) a progressive decrease in the percentage of the population living on farms, (2) a gradual increase in the proportion of the cattle that are of dairy breeding, (3) progressive opening up of new areas to commercial dairying as roads are improved and hauling costs reduced, (4) wider distribution of commercial dairy products, improved quality and increased consumption as a result of more general use of electrical refrigeration in stores and homes, and (5) increased consumption of cheese through development of new products and improvement in packaging and in retail distribution. It is also probable that an increasing proportion of the population will be able to buy the dairy products they want.

Creamery butter production in 1939 was 1,762 million pounds, about 1 percent below the high record of 1,786 million pounds produced in 1938 but nearly 6 percent above average production during the previous 5 years. Butter production might have been heavier in 1939 if the year had not opened with butter stocks at a record high level for January 1. During the year stocks held by government agencies were reduced from 96 million pounds to 15 million pounds. Cheese production in 1939, excluding cottage cheese and other skim milk varieties, totaled about 703 million pounds, a substantial drop from the 725 million total of 1938 but more than 50 million pounds above production in any other year. The production of whole milk American or cheddar cheese, after increasing annually for six years, declined to 533 million pounds as compared to 561 million in 1938. Cream cheese production increased to 48 million pounds and Italian varieties to 19.6 million, both new highs by several million pounds. Cottage cheese production also set a new high record. The production of condensed and evaporated whole milk, taking all kinds together, was about 2,367 million pounds or 2 percent larger than in 1938. The increase was chiefly in canned evaporated milk which rose to a total of 2,171 million pounds. Canned condensed milk, relatively unimportant in recent years, dropped further to 35 million pounds and production of the various kinds of bulk condensed milk declined slightly to 535 million pounds. Ice cream production in 1939 reached 303 million gallons. Excluding the output of retail manufacturers, which is becoming increasingly important and is also being more completely enumerated, the production in ice cream plants was 277 million gallons compared with 263 million in 1938 and 276 million in 1937.